

**A METHOD OF USING A METAL
PLATFORM FOR MAKING A HIGHLY
RELIABLE AND REPRODUCIBLE
METAL CONTACT MICRO-RELAY
MEMS SWITCH**

ABSTRACT

[90] A method and apparatus are presented for providing improved reliability, yield, and performance of contacts in micro-electro-mechanical system (MEMS) switches. Specifically, the invention relates to the placement of a metal platform on the base electrodes for making a reliable and reproducible contact. The MEMS switch comprises: an actuating portion attached with a substrate; an actuating portion contact disposed on the actuating portion; and a substrate contact on top of the substrate, the substrate contact including a metal platform portion extending a height therefrom toward the actuating portion contact, wherein the actuating portion contact and the substrate contact are aligned to contact when the actuating portion is moved from a first position to a second position.